Alabama Severe Weather Awareness Week 2005

No one is immune...

are you ready?

An Annual Educational Effort Sponsored by

NATIONAL WEATHER SERVICE

Alabama EMA
Emergency Management Agency

American Red Cross

Mercedes-Benz

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Severe Weather Awareness Week in Alabama
February 13 - 18, 2005

Sunday, February 13 through Friday, February 18, 2005, has been proclaimed Severe Weather Awareness Week in Alabama by Governor Bob Riley. During this special week, Alabamians are encouraged to learn and/or review the proper safety precautions necessary for protecting your life during severe weather.

Throughout this week, the National Weather Service, Alabama Emergency Management Agency, and American Red Cross chapters in Alabama will be conducting educational activities to help people learn how to prevent injuries and deaths from tornadoes, damaging wind, floods, lightning, and hail. Media outlets are asked to promote this week through articles, stories, and interviews to acquaint people with severe weather dangers and the proper safety precautions necessary for survival.

This booklet details material on severe weather and ways to prepare for it. Tornadoes, damaging wind, floods, lightning, and hail ALL pose great danger to Alabama. Weather-related disasters do occur annually from these phenomena. After nearly every weather disaster, the story is the same; people survive because they know what to do! By taking a few minutes to learn or review severe weather safety rules and procedures, you could save your life or someone else's.

A statewide tornado drill will be conducted by the National Weather Service and Alabama Emergency Management Agency on Wednesday, February 16th. The purpose of this drill is to determine if Alabamians can adequately receive a tornado watch or warning and to practice the actions necessary for protecting their lives and others in the event of a real tornado. We encourage everyone's participation, including media, in the drill to make it a meaningful practice. The drill will be postponed to Friday, February 18th if bad weather should occur on Wednesday the 16th. Alabama's statewide drill is conducted jointly with a few other southeastern states.

National Weather Service employees discuss operations

Governor Bob Riley with
Alabama EMA Director Bruce Baughman
Photo courtesy of the Montgomery Advertiser
(Photographer Julie Bennett)

Photo courtesy of the Birmingham chapter of the American Red Cross

Contents

Acknowledgements

Front cover photo was damage from November 24, 2001 near Sylacauga
Back cover photo is the Palm Sunday, Piedmont tornado taken by Jeff Formby on March 27, 1994.
Research and graphs - Krissy Hurley
Graphic design and arrangement - Darone Jones
Contributing Editor - Michael Scotten

Messages from the National Weather Service and Alabama Emergency Management Agency

The National Weather Service offices serving Alabama invite everyone to get prepared for severe weather. Please use this week to review or develop a family, school, or business emergency action plan. In fact, Alabama has two distinct severe weather seasons, Spring and Fall. That spells a major severe weather outbreak threat every six months! Severe weather can occur anytime in Alabama, so we must be prepared at all times.

The dedicated people at the National Weather Service are committed to protect life and property from severe weather through the close coordination of our friends in emergency management, the American Red Cross, and the media. We are here 24 hours a day, 365 days a year, keeping a close watch on the safety of our neighbors.

That's what this week is all about, time to learn, time to review, and time to get ready! It is not if we get more devastating severe weather, it's simply when!

Kenneth E. Graham, Meteorologist-in-Charge
National Weather Service, Birmingham

The Alabama Emergency Management Agency (AEMA) joins Governor Bob Riley, county emergency managers, the National Weather Service, American Red Cross, and Alabama Department of Education each year in the campaign to educate people in our state about severe weather. Alabamians commonly face the threat of natural disasters caused by severe weather. This is why severe weather awareness is so important. Our goal during this week and beyond is to encourage everyone to learn how you and your family can prepare for severe weather. Planning ahead could save your life.

Bruce Baughman, Director
AEMA, Clanton

Recognizing Our Partners

In recognition of their commitment to public service and safety, the National Weather Service extends a special thanks to those contributing to the 2005 edition of Severe Weather Awareness Week in Alabama:

American Red Cross

Mercedes-Benz

Alabama SKYWARN Foundation, Inc.

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Severe Weather Awareness Week in Alabama, an annual public awareness campaign to draw attention to severe weather preparedness, is 30 years old. Begun by the National Weather Service following the April 3rd and 4th, 1974, super-outbreak of tornadoes, this week has been observed each year as part of a continuing commitment to improve severe weather awareness. The National Weather Service has traditionally led this campaign, but additional partners have joined to improve and expand this effort to reach Alabamians with this important information.

Alabama Has Two Distinct Severe Weather Seasons

Alabama now has two distinct severe weather seasons according to the latest tornado data. November, previously named as Alabama's Secondary Severe Weather Season, has officially surpassed March or April months during the former Primary Severe Weather Season, with the most tornadoes of any month.

According to National Weather Service data since 1950, the number of recorded tornadoes in Alabama for March and April is 199 and 196, respectively. A total of 201 tornadoes has been recorded in November during the same time period, making it the most active month for tornadoes in Alabama. (see page 18)

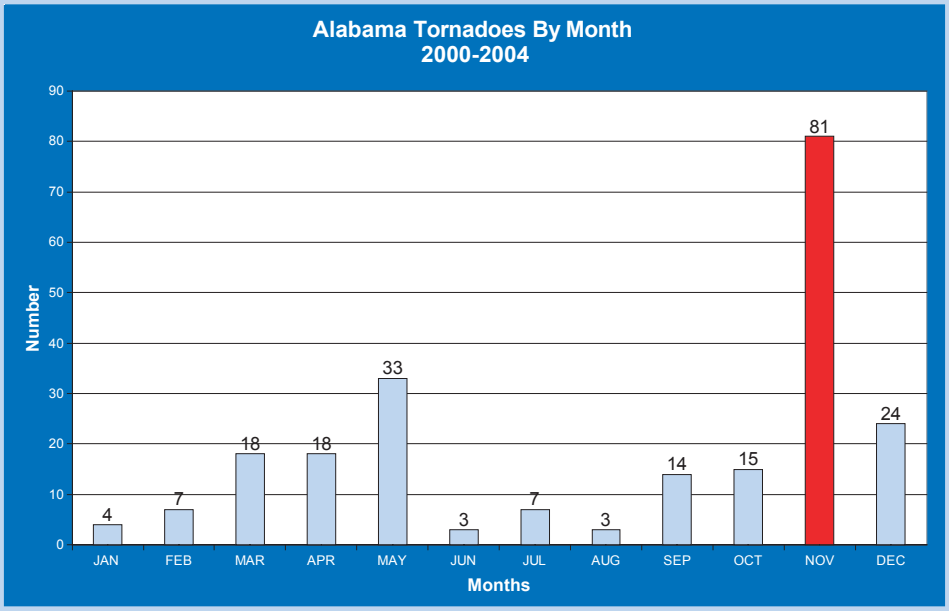
The reason for such a recent increase in tornadoes in November can be attributed to several severe weather outbreaks which have occurred during this month. Since 2000, Alabama has experienced four major outbreaks of tornadoes during the Fall Severe Weather Season.

1) November 24, 2001 - 34 tornadoes

2) November 24, 2004 - 21 tornadoes

3) December 16, 2000 - 14 tornadoes

4) November 10, 2002 - 11 tornadoes



Between 2000 and 2004, 81 tornadoes were recorded during November in Alabama, which is by far the most of any month. This number surpasses the number of tornadoes in March, April, and May combined during the same period. This proves that Alabama has two distinct severe weather seasons that are equally important, one in the Spring and one in the Fall.

Amazingly, 56 tornadoes (which includes one additional tornado in 2000 to the two major outbreaks in 2001 and 2004) have been recorded on November 24 alone since 2000! This day by far is the most tornado-prone day over the past five years.

A total of 55 tornadoes were recorded across Alabama in 2004. Nearly half of these tornadoes, 26, occurred in the month of November. Only two tornadoes occurred in March, and zero occurred in April in 2004. Last year's total surpasses the 42 tornadoes reported in Alabama in 2003. On average, 23 tornadoes occur each year in Alabama.

While Alabama is ranked 13th in the nation for the number of tornadoes, it is third in the number of tornado related deaths.

Alabama is one of the few places on Earth that has two severe weather seasons. However, severe weather can occur any time of day during the year. With one of the two distinct severe weather seasons always lurking on the horizon, now is the time to prepare!

Preparation Needed to Survive Severe Weather

Basic severe weather preparedness plans must include:

1) *A thorough knowledge of safety rules*
2) *Selection and designation of the best shelter available*
3) *A reliable method of receiving warning information*
4) *Proper instructions for each person to follow when a watch or warning is issued or if threatening weather*

Preparing for severe weather is the theme of Severe Weather Awareness Week, so how do we go about it? Preparedness plans come in all sizes as dictated by individual and collective needs, but it always comes down to the individual. Do you know the basic safety rules? Would your children know what to do if home alone? Are plans ready to move elderly or disabled people to shelter quickly? What is your best source for obtaining warning information?

Your local emergency management agency, the National Weather Service, or your local American Red Cross chapter can help you with your planning. Severe weather safety information is available upon request.

rules of the game

Watch and Warning

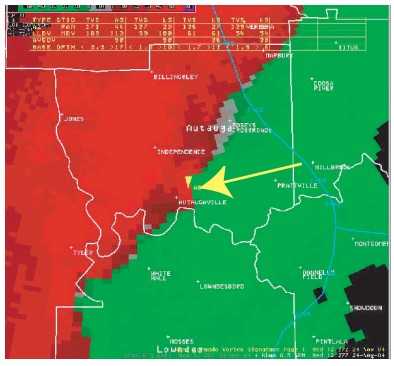
A **Watch** means that ***conditions are favorable*** for severe thunderstorm or tornado development. **This is the time to prepare.** You should keep alert by listening to radio, television, or weather radio for the latest weather information. Know where your children are. Be aware of where you will go and what you will do if a severe thunderstorm or a tornado threatens.

A **Warning** means a severe thunderstorm or tornado ***has been sighted or indicated by radar.*** **People in the path of the storm should take immediate life saving actions.**

The primary mission of the National Weather Service is to warn of impending hazardous weather. Storm spotter reports, and radar/satellite data help, but severe weather can and does develop undetected. Advance warning time is often only a few minutes and may be only a few seconds.

Fortunately, the warning system continues to get better. Improvements in Doppler radars and computer systems have helped to detect weather phenomena over small areas in shorter periods of time. The Emergency Alert System (EAS) has sped up the distribution of warnings. An improved NOAA Weather Radio network has allowed nearly everyone to receive the most current weather broadcasts. But all of these efforts will fail if you do not know what to do or where to go! Everyone needs the knowledge to react quickly and a plan of action when severe weather materializes.

National Weather Service Birmingham Operations Area



Radar indicated tornado near Autaugaville (Autauga County) November 24, 2004

The National Weather Service has issued a Tornado Warning for...

Preparedness is the key in dealing with any weather hazard!

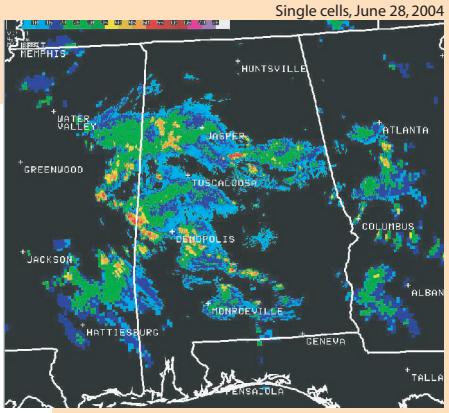
Thunderstorms in Alabama

Thunderstorms are a common occurrence in Alabama. Although they can strike at any time, thunderstorms are more frequent during the warm season in the spring, summer, and early fall months. Tornadoes, lightning, damaging wind, hail, and flooding are the main hazards from thunderstorms.

The best defense against thunderstorms is to stay inside a substantial building. Shelter can protect you from deadly lightning, strong winds, possible large hail, and heavy rainfall. Fortunately, thunderstorms do not usually last for a long time and will generally pass in less than an hour. When thunderstorms are expected, be sure to pick up loose objects around your home or business before the storms arrive as they can become damaging and/or deadly missiles in strong winds.

Thunderstorms are categorized into three main types: Single-cell, Squall Line (Multi-cell), and Supercell.

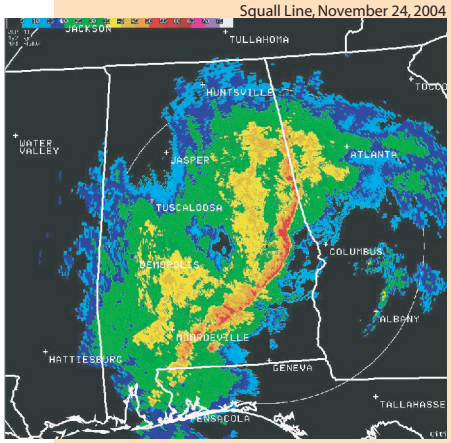
Single cells, June 28, 2004



Single-cell thunderstorms, also known as pulse, airmass, or summertime thunderstorms, are individual or clusters of thunderstorms that are not usually severe. Frequent lightning strikes and locally heavy rainfall capable of producing flooding are the main hazards from these storms as they are slow-movers. These storms usually occur in the summertime when the atmosphere is warm and unstable, but winds are weak.

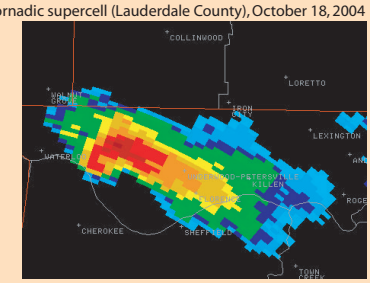
Severe Thunderstorm - A thunderstorm producing tornadoes, winds at or above 58 mph, and/or penny size hail (3/4 of an inch in diameter) or larger.

Squall Line, November 24, 2004



Squall lines and multi-cell thunderstorms are organized complexes of thunderstorms that cover large areas and great distances. These storms are often severe. Damaging wind is the main hazard, since they move rapidly, although tornadoes, hail, and heavy rainfall capable of producing flooding are possible as well. Squall lines are most common during the active spring and fall severe thunderstorm months of March, April, May, November, and early December.

Tornadic supercell (Lauderdale County), October 18, 2004



Supercell thunderstorms are the most dangerous category of thunderstorms. They can produce long-lived tornadoes, winds in excess of 100 mph, and very large hail. Fortunately, they are not very common, and they usually cover small areas. At times, they can be embedded in clusters of thunderstorms or squall lines. Supercells are most common during the active spring and fall severe thunderstorm months of March, April, May, November, and early December.

Lightning

EVERY THUNDERSTORM contains this potential killer. It does not matter if the thunderstorm is a huge severe storm or a typical summer afternoon storm. In a thunderstorm, that electrical charge, which may reach 100 million volts, is always present as it searches for the path of least resistance to complete the circuit from the cloud. It might strike you, an isolated tree, or an object in the open. Keep in mind that you do not have to be standing directly beneath a cloud to be struck. Lightning can strike under clear skies as long as the parent thunderstorm cloud is nearby.

Lightning has been called "the under-rated killer," and rightfully so since it does not usually get as much headline attention compared to other dangerous weather phenomena. Nationally, 100 deaths and 500 injuries on average occur in the United States as a result of lightning strikes. In a typical year, lightning will strike the U.S. over 21 million times and will claim more

Anyone outdoors is particularly vulnerable to lightning. To keep people safe when lightning is in the area, every person, group, or school involved in outdoor activities should have a plan that can be activated. Take time to learn lightning safety rules. That quick dash out in the open with a nearby thunderstorm area may unnecessarily expose you to the possibility of being struck. Is it worth the risk?

The 30/30 Safety Lightning Rule could save your life!

The first '30' means that you need to take cover if you hear thunder within 30 seconds of the seeing the lightning flash.

The second '30' means that you should wait at least 30 minutes after the last lightning flash or thunder clap to resume normal outdoor activities (the "all clear" signal)

Lightning Safety

- Get indoors in a strong sturdy building!

Motor vehicles provide good shelter from lightning as well.

- Avoid using the phone except for emergencies and stay away from windows.

- Avoid being in or near high places, open fields, isolated trees, unprotected gazebos, rain or picnic shelters, baseball dugouts, towers, flagpoles, light poles, bleachers, metal fences, convertible vehicles, golfcarts, motorcycles, scooters, and lawn mowers.

- Stay away from metallic objects such as fences, clotheslines, or pipes.

- Move away from bodies of water.

- In a forest, seek shelter in a low area under a thick growth of small trees.

- In open areas, go to a low place such as a ravine or valley. Be alert for flooding.

- If you feel your hair stand on end, lightning may be about to strike you. Crouch down low, but do not lie flat on the ground.

Remember, there is no truth to the old myth that "lightning never strikes twice in the same place."

Damaging Winds & Hail

Homewood (Jefferson County), February 16, 2001

Straight-line damaging wind, not to be confused with tornadoes, do occur in some thunderstorms each year in Alabama. These winds may down trees and power lines, overturn mobile homes, and cause damage to well-built structures.

It is important to know that all wind damage is not caused by tornadoes. Reports immediately after a severe weather event usually attribute significant damage to a tornado. But frequently, strong straight-line winds are responsible for damage equivalent to that of a weak to strong tornado. In fact, these wind events are more common than tornadoes in Alabama. In a typical year, Alabama is likely to experience 10 to 20 times as many straight line wind events as tornado events.

Downbursts

Another form of non-tornadic damaging winds from thunderstorms are downbursts. A downburst refers to a very small area of rapidly descending air beneath a thunderstorm that strikes the ground, producing isolated areas of significant damage from high wind. Wind speeds in downbursts can exceed 100 mph and may be accompanied by a loud roar, often mistakenly associated only with tornadoes. They mainly occur during the summer months in a few afternoon thunderstorms. The combination of warm moist air near the surface and dry air at the mid levels of the atmosphere supports downbursts in thunderstorms.

Since downbursts develop quickly in only a select few thunderstorms, they are very difficult to detect and give weather forecasters and the general public little or no advance notice.


Even the National Weather Service is not immune from damaging winds.


A MODERN HAZARD OF THE HAIL-STORM
Automobiles riddled at Dallas, Texas, May 8, 1926

Although hail forms in every thunderstorm that develops, it only reaches the ground if the storm is strong enough and the atmospheric conditions are favorable. If hail reaches the ground, it usually occurs in springtime thunderstorms when the atmosphere is cooler, especially at the mid and high levels. Hail may take on many different sizes and shapes from some hailstones resembling flat-shaped pennies to some that may have the appearance of softballs.

Large hail can be very dangerous. It can cause damage to objects such as motor vehicles, structures, and trees. Bodily injuries or even deaths can occur if people are caught outdoors when large hail occurs.

Tornadoes

Tornadoes are violently rotating columns of air that descend from thunderstorm clouds to come in contact with the ground. They typically develop when the following atmospheric ingredients come together:

- a supply of warm, humid air near the surface
- a nearby low pressure disturbance to help lift the air and create thunderstorms
- strong atmospheric winds increasing with height

F3 Tornado, Foley (Baldwin County)
October 13, 2001

Most tornadoes in Alabama occur during two main times of the year. The Spring Severe Weather Season occurs in March, April, and May, and the Fall Severe Weather Season occurs in November and early December. They typically occur between noon and 8 pm. However, they have occurred in every hour of each day and night, so no time is immune from tornadoes.

Tornadoes have wind speeds that vary from as little as 50 mph to speeds in excess of 300 mph. They move with the thunderstorms that produces them with forward motions varying from nearly stationary to 70 mph. Most thunderstorms producing tornadoes travel from the southwest toward the northeast.

Remember, tornadoes form quickly! You may have only a few seconds to react and find shelter. When a tornado threatens, your immediate action can save your life! Know what to do and where to go!

Safety Rules

BE Calm Smart Safe

In schools, nursing homes, hospitals, factories, and shopping centers:

Go to a pre-designated shelter area. Basements are the best, but interior hallways on the lowest floor usually offer protection. Close all doors to the hallway for

In homes or small buildings:

Go to the basement or a small interior room such as a closet, a bathroom, or an interior hallway on the lowest level. If available, get under something sturdy like a heavy table. Protect yourself from flying debris with pillows, heavy coats, blankets, or quilts. Use bicycle or motorcycle helmets, if available, to protect your head.

Stay away from windows! Do not bother opening or closing them. It will not protect the structure. You will waste time and put yourself and possibly others at greater risk. Use those valuable seconds to find a place of safety.

Stay away from doors and outside walls!

Protect your head!

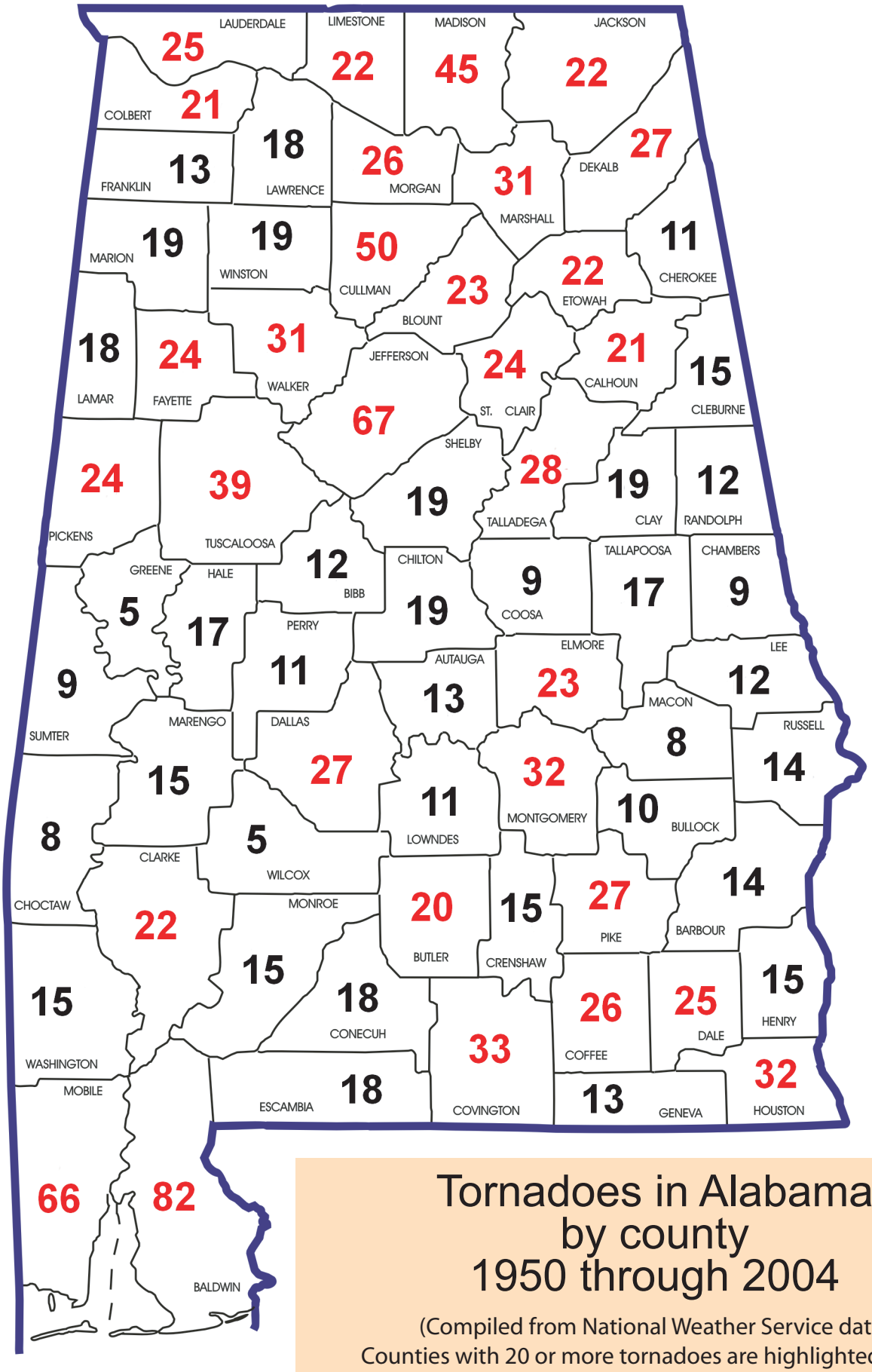
In mobile homes or vehicles:

Leave them and go to a strong building. If there is no shelter nearby, get into the nearest ditch, depression, or underground culvert and lie flat with your hands shielding your head.

Photo courtesy of Sam Barricklow

http://www.k5kj.net/index.htm

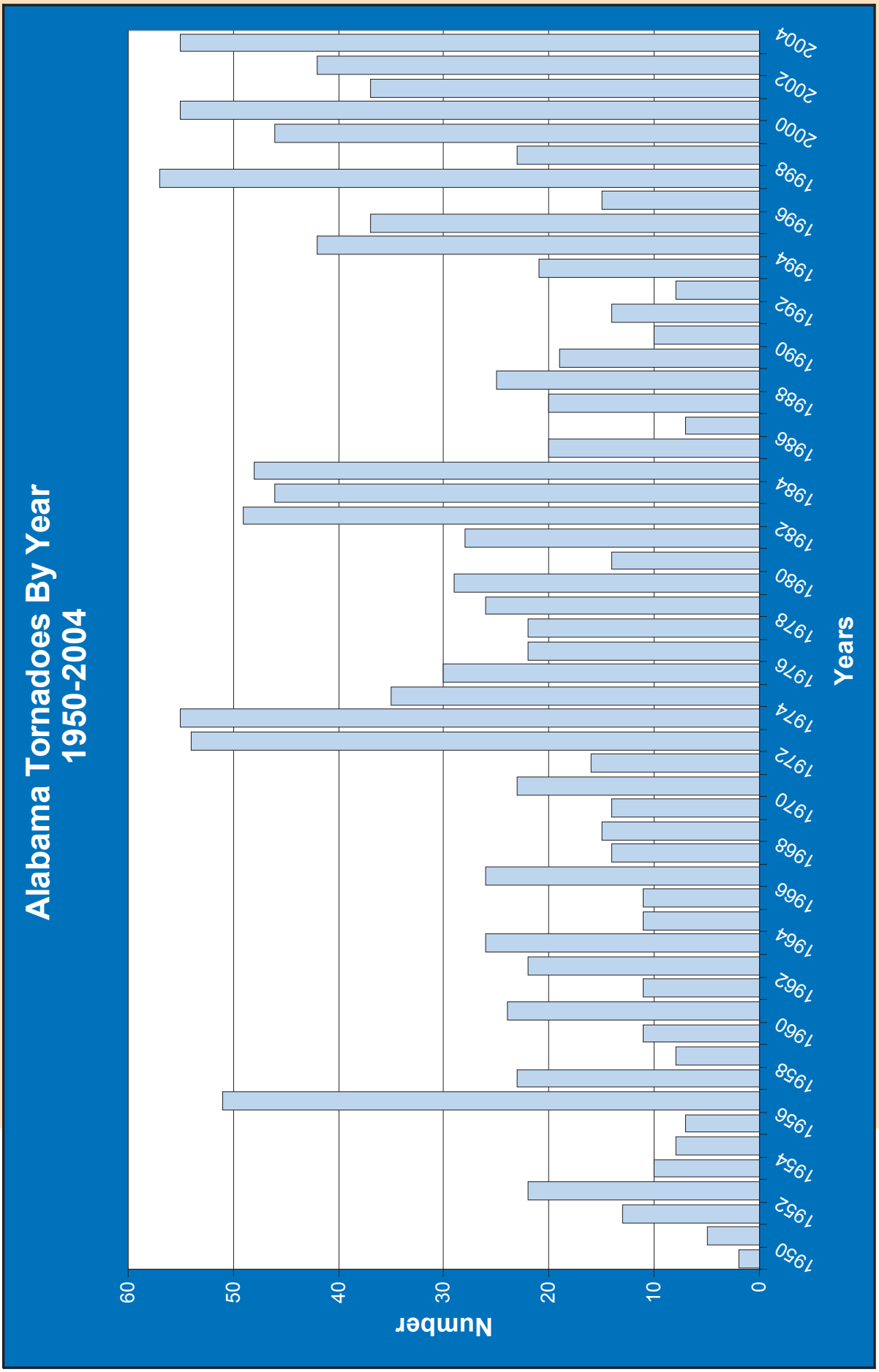
Tornadoes By County in Alabama



Tornadoes in Alabama by county 1950 through 2004

(Compiled from National Weather Service data)
Counties with 20 or more tornadoes are highlighted in red.

Tornadoes By Year



Flooding

Homewood, September 16, 2004 (courtesy of Jefferson County EMA)

Flash Flood

Flash flooding can occur almost anywhere at any time in Alabama. It can occur within a few minutes or hours of excessive rainfall, or from a dam or levee failure. Flash floods can destroy buildings and bridges, tear out trees, roll boulders, and scour out new channels. Rapidly rising water can reach heights of 30 feet or more! Furthermore, flash flood-producing rains can also trigger catastrophic mudslides. You may not always have a warning of these sudden and deadly floods.

Homewood, September 16, 2004 (courtesy of Jefferson County EMA)

Urban/Area Flood

Flooding can be magnified in urban areas. As land is converted from fields and woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization increases runoff two to six times over what would occur on natural terrain. During periods of urban flooding, streets can become swift-moving rivers, while basements can become death traps as they fill with water.

Tennessee River in Lacey's Spring
(photo courtesy of Patrick Gatlin, NWS)

River Flood

Flooding along rivers is a natural and inevitable part of life. Some floods occur seasonally when winter or spring rains fill river basins with too much water too quickly. Others can occur from slow moving low pressure systems. Torrential rains from decaying hurricanes or tropical systems can also produce major or record river flooding.

Flood
Safety & Products

Flood Safety Rules

* **During periods of heavy rain, move to higher ground and stay away from low lying areas such as streambeds, drainage ditches, and culverts.**

Water runs off streets and parking lots very rapidly causing natural and man-made drainage systems to overflow with rushing flood waters. These flood waters carry debris that can be deadly to someone in their path. A rapidly flowing stream or ditch can sweep you off your feet or even sweep your car downstream.

* **Stay out of flooded areas**.

In flooded areas, the water may still be rising and is usually swift. Children are especially vulnerable and should not be allowed to play or walk in flowing water.

* **Never drive your car into water of unknown depths or around barricades**

Most flash flood deaths occur when people drive their vehicles into flood waters. Flood waters may rise very quickly and could cover the vehicle or sweep it away. If your vehicle stalls, abandon it and immediately seek higher ground.

* **Be especially cautious at night, when it is harder to recognize flood dangers.**

Water is a very powerful force and should never be underestimated!

Happy Hollow area of Livingston, AL (Sumter County) , April 2003

Types of Flood Watches and Warnings Issued by the National Weather Service

Watches

FLASH FLOOD WATCH - issued when conditions are favorable for flash flooding (sudden short-term flooding that lasts less than 6 hours). This includes floods from dam or levee failure.

FLOOD WATCH - issued when conditions are favorable for long-duraton (longer than 6 hours) flooding. This includes river flooding.

Warnings

FLASH FLOOD WARNING - issued when flooding occurs or is imminent within 6 hours of the event.

FLOOD WARNINGS - issued when flooding occurs or is imminent and is expected to occur more than 6 hours.

RIVER FLOOD WARNING - issued when flooding is occurring or expected to occur near streams and rivers.

Storm Spotters

Technology plays a critical role in severe weather, but another important element in the warning system is the storm spotter. Storm spotters come from all walks of life, joined by their interest in weather and serving their community. Spotters are associated with SKYWARN, a volunteer program developed many years ago by the National Weather Service (NWS) to train and organize spotters in every community. Spotters are organized around local emergency management agencies, amateur radio clubs, and public service personnel from fire departments, rescue squads, and law enforcement agencies.

The Alabama SKYWARN Foundation, Inc., is a non-profit organization established to promote severe weather safety in Alabama. Each year, Alabamians are faced with a variety of severe weather threats ranging from winter storms to tornadoes. One key to keeping the toll in deaths and injuries to a minimum is education. By understanding the dangers and knowing the proper safety precautions ahead of time, Alabamians can respond quickly and appropriately when those dangers threaten.

The Alabama SKYWARN Foundation relies on donations to defray the costs in these efforts. These donations are tax deductible. The Foundation is especially pleased to recognize the support of Mercedes-Benz International, the American Red Cross Birmingham Chapter, and Russell Corporation for their direct support in making this annual publication possible.

The Foundation has hopes as added resources become available to help in other ways to improve severe weather safety and awareness in Alabama. NOAA Weather Radio receivers can be purchased for distribution to people who are unable to afford them, especially in rural areas where outdoor sirens are less practical. Storm spotters provide valuable reports during warning situations, and many of these efforts need support since they are primarily voluntary.

More information about the Alabama SKYWARN Foundation can be found at www.alabamaskywarn.org.

Warning Coordination Meteorologist Jason B. Wright presenting a Storm Spotters Class

Spotters are critical because they provide timely information on the actual weather that is occuring at the ground, known as ground truth. Satellite imagery and Doppler radar provide NWS meteorologists with large amounts of information about the storm and its structure, but does not provide the specifics about the weather actually occurring at the ground. This is where spotters become the eyes and ears for the community.

Storm spotters go through training provided by the NWS to gain an understanding of storm structure, especially the most severe thunderstorms climatology of Alabama tornadoes, exposure to visual clues, and information on tornado safety and reporting procedures.

Amateur radio operators compose one of the largest groups of spotters in Alabama because of their ability and willingness to communicate using their radios even when power and conventional communication methods are knocked out. NWS offices have established working relationships with the amateur radio community by including radio equipment in the offices to communicate with spotters in the field.

Additional information on storm spotter activities can be found on the Internet at the NWS web sites (see page 17) and at www.alert-alabama.org.

Voice of the National Weather Service

Weather information direct from the National Weather Service

NOAA Weather Radio

NOAA Weather Radio, the voice of the National Weather Service, provides updated weather information continuously, 24 hours a day, every day of the year.

To receive the broadcasts originating from the National Weather Service, a special radio capable of receiving signals in the Very High Frequency (VHF) public service band is required. In Alabama, frequencies from 162.400 to 162.550 megahertz are used for NOAA Weather Radio broadcasts. Alabama is served by 29 transmitters which places approximately 95 percent of the people in the state within range of a weather radio transmitter.

National Weather Service personnel prepare weather information that is broadcast in three to five minute cycles. This includes watches and warnings, area forecasts for the next seven days, current weather conditions, climate data, and other weather information.

Location	Frequency (Mhz)
Arab	162.525
Auburn	162.525
Bethlehem, FL	162.450
Birmingham	162.550
Blakely, GA	162.525
Brewton	162.475
Columbus, GA	162.400
Cullman	162.450
Demopolis	162.475
Dozier	162.550
Florence	162.475
Fort Payne	162.500
Greenville	162.425
Huntsville	162.400
Jackson	162.500
La Grange, GA	162.450
Leakesville, MS	162.425
Meridian, MS	162.550
Mobile	162.550
Montgomery	162.400
Mt. Cheaha	162.475
Oneonta	162.425
Pensacola, FL	162.400
Selma	162.450
Sumerville, GA	162.450
Texasville	162.475
Tuscaloosa	162.400
Winchester, TN	162.525
Winfield	162.525

NOAA Weather Radio is useful anytime, but becomes more important during severe weather. During threatening weather, normal broadcasts are interrupted, and the focus is shifted to the local severe weather threat. Watches, warnings, and statements are given the highest priority and are frequently updated.

NOAA Weather Radio is also a major part of the Emergency Alert System (EAS) that disseminates critical warning information rapidly through commercial broadcast outlets. In an emergency, each NOAA Weather Radio station will transmit a warning alarm tone signal followed by information on the emergency situation. This signal is capable of activating specially designed receivers by increasing the volume or producing a visual and/or audible alarm. Not all weather band receivers have this capability, but all radios that receive NOAA Weather Radio can receive the emergency broadcasts. The warning alarm device is tested each Wednesday, usually between 11 am and noon, weather permitting.

A feature available in the newest weather radio receivers called SAME, Specific Area Message Encoding, allows weather radios to be programmed for the reception of critical weather information for counties in your area.

Media are urged to use NOAA Weather Radio and may freely rebroadcast broadcasts.

Safety After the Storm

Safety does not stop after the storm has passed. Everyone should be aware of the many dangers that might exist after bad weather has moved out of the area.

Bluff Park (Jefferson County), May 31, 2004

1) Remain calm!

2) Deal with immediate problems such as protecting yourself and others first, then attend to those who are injured until professional help arrives.

3) Locate your emergency supply kit with essential documents and materials for taking care of yourself and others.

4) Do not light matches or turn on electrical switches if you suspect damage to your home or business. Also, avoid using candles. While inexpensive, candles are open flames that can start fires.

5) Carefully check for damage around your home or business.

Trees and tree limbs may be weakened and could fall unexpectedly, so use caution when walking through areas where high wind or tornadoes have passed through.

STAY AWAY FROM DOWNED POWERLINES. Do not attempt to touch or move them. Keep children and pets away from downed power lines. Report downed wires to your local power company.

If you smell gas or suspect a leak, turn off the main gas valve, open windows, and get everyone out of the structure quickly.


Coldwater (Calhoun County) , November 24, 2004

6) Clean up or rope off dangerous areas.

7) Be sure not to forget about caring for pets after a disaster has occurred.


Hillcrest Meadows (Tuscaloosa County), December 16, 2000


Rainsville (Dekalb County), April 22, 1997


Hillcrest Meadows (Tuscaloosa County), December 16, 2000

2004 - Alabama Year in Review

the numbers

Warnings Issued for Alabama by the National Weather Service :

Tornado Warnings 181
Severe Thunderstorm Warnings 589
Flash Flood Warnings 274
Total 1044

The Annual Average Number of Warnings (1994-2003):

Tornado Warnings 209
Severe Thunderstorm Warnings 921
Flash Flood Warnings 124
Total 1254

During 2004, tornadoes, thunderstorm wind damage, severe hail, and/or flash floods were reported 72 days of the year across Alabama. Nearly one in five days had severe weather last year. The following is a list of each day that any place in Alabama received one or more of the severe weather events mentioned above.

January 26 - W
February 5 - W, H, F
February 6 - W, F
February 23 - F
February 25 - F
March 5 - T, W, H, F
March 6 - F
March 30 - H
April 7 - W, H
April 8 - W, H
April 10 - W, H
April 11 - H
April 12 - W, H
April 22 - W, H
May 1 - H
May 2 - W
May 9 - W, H
May 17 - H, F
May 18 - H
May 30 - T, W, H
May 31 - T, W, H
June 1 - H, F
June 2 - W, H, F
June 3 - W, H
June 8 - W, H
June 12 - W
June 13 - W
June 16 - W
June 18 - W
June 22 - W
June 23 - W
June 24 - W, H
June 25 - T, F
June 26 - W
June 27 - W, H
June 28 - W, F
June 29 - F
July 2 - F
July 3 - H
July 4 - W, H
July 6 - T, W, H, F
July 7 - W, H
July 8 - W
July 12 - W, H
July 13 - W, H
July 14 - T, W, H, F
July 15 - W, H, F
July 16 -W, H
July 25 - W, H, F
July 26 - W, F
July 31 - F
August 11 - W, F
August 12 - W, F
August 20 - T, W, H
August 28 - W, H
September 2 - F
September 12 - H, F
September 16 - T, F
September 17 - F
October 2 - W
October 18 - T, W
October 19 - T, W, H, F
October 20 - W, H
October 21 - H
November 23 - T, W, H, F
November 24 - T, W, H, F
November 27 - T, W
November 30 - F
December 6 - F
December 7 - T, W, F
December 9 - W, F
December 10 - H

T - tornado, W - thunderstorm wind damage, H - severe hail, F - flash flood

Six days of the year reported each of the four hazards:

March 5
July 6
July 14
October 19
November 23
November 24

Tornadoes were recorded 14 days in 2004 across Alabama. Those days were:

March 5
May 30
May 31
June 25
July 6
July 14
August 20
September 16
October 18
October 19
November 23
November 24
November 27
December 7

Thunderstorm wind damage was reported 50 days in 2004.

Severe hail was reported on 40 days in 2004.

Flash floods were reported 32 days in 2004.

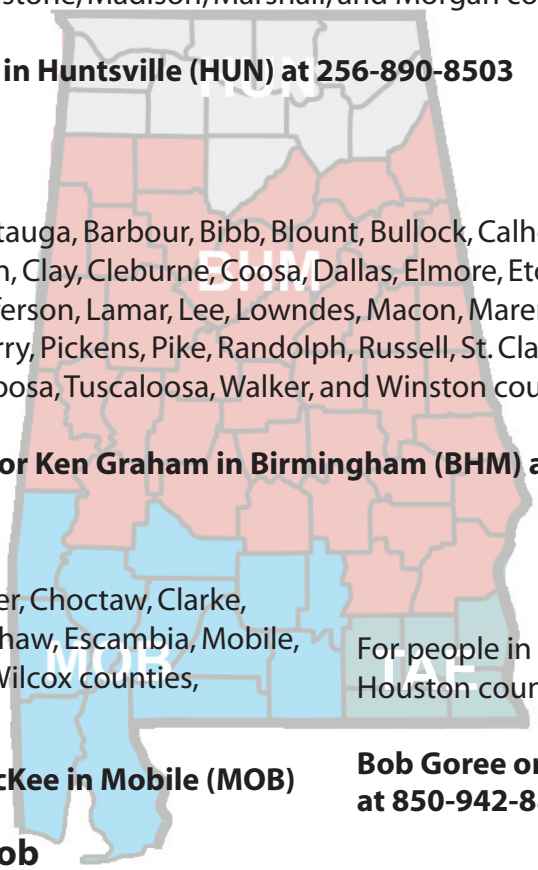
Contacts for More Information

This booklet contains valuable materials concerning Severe Weather Awareness Week. You are invited to contact the National Weather Service, state and county emergency management agencies, and local American Red Cross chapters for interviews and answers to your questions. National Weather Service personnel are available for severe weather awareness programs to civic and industrial organizations, schools, hospitals, and others interested in severe weather safety. Representatives of your local emergency management agency and the nearby American Red Cross chapter may also be available for assistance. For more information, contact the National Weather Service office serving your area, your county or state emergency management agency, or nearby American Red Cross chapter.

Each county in Alabama is served by a National Weather Service office as identified here:

For people in Colbert, Cullman, Dekalb, Franklin, Jackson, Lauderdale, Lawrence, Limestone, Madison, Marshall, and Morgan counties, contact:

Tim Troutman in Huntsville (HUN) at 256-890-8503



For people in Autauga, Barbour, Bibb, Blount, Bullock, Calhoun, Chambers, Cherokee, Chilton, Clay, Cleburne, Coosa, Dallas, Elmore, Etowah, Fayette, Greene, Hale, Jefferson, Lamar, Lee, Lowndes, Macon, Marengo, Marion, Montgomery, Perry, Pickens, Pike, Randolph, Russell, St. Clair, Shelby, Sumter, Talladega, Tallapoosa, Tuscaloosa, Walker, and Winston counties, contact:

Jason B. Wright or Ken Graham in Birmingham (BHM) at 205-664-3010

For people in Baldwin, Butler, Choctaw, Clarke, Conecuh, Covington, Crenshaw, Escambia, Mobile, Monroe, Washington, and Wilcox counties, contact:

Gary Beeler or Randall McKee in Mobile (MOB) at 251-633-6443
www.srh.noaa.gov/mob

For people in Coffee, Dale, Geneva, Henry, and Houston counties, contact:

Bob Goree or Paul Duval in Tallahassee, FL (TAE) at 850-942-8833

For the Alabama Emergency Management Agency, contact Scott Adcock in Clanton at 205-280-2247.

For the American Red Cross, contact your local chapter or Cindy Bahri in Birmingham at 205-458-8263.

For the Alabama Department of Education, contact the Information & Communication Office in Montgomery at 334-242-9950.

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Tornadoes By Month and Hour